Pituitary Gland Tumours

Introduction

This page contains information about pituitary gland tumours.

This information will provide a basis for your discussions with your doctors and nurses.

Pituitary tumours (adenomas) Pituitary tumours are almost invariably benign (non-cancerous). They are often called adenoma5 and are usually slow growing.

The pituitary is a small oval shaped gland found at the base of the brain below the optic nerve. The gland secretes hormones that control other glands in the body. It secretes a number of hormones such as:

- **Growth Hormone** which controls growth
- **Prolactin**, stimulates milk production after childbirth
- **ACTH** stimulates the adrenal glands to produce hormones
- **TSH** stimulates the thyroid gland
- **FSH** and **LSH** influence the production of hormones from the ovaries and testes.
- **ADH** controls the concentration of urine.
- **Oxytocin** stimulates the contraction of the womb in childbirth and the production of milk for breast feeding.

Symptoms

Most of the symptoms are a result of a hormone imbalance and can take a long time to develop.

Prolactin secreting tumours are most common and result in an absence of monthly periods and production of breast milk. Men may experience impotence. Infertility is common in both sexes.

Tumours secreting **FSH** or **LSH** are rare but would cause infertility also

Tumours that secrete an excess of growth hormones may cause a condition called gigantism or acromegaly, which is noticeable by the enlargement of the hands and feet.

Symptoms including weight gain, increase in facial hair and depression can result from an over-production of **ACTH**.

Sometimes a condition called diabetes insipidus is found, especially if there is disruption in the levels o f **ADH**. The main symptoms are passing large amounts of urine and continuous thirst.

Pituitary adenomas can cause pressure particularly on the **optic nerve** which leads to problems with vision and can cause headaches.

Diagnosis

Pituitary tumours are often discovered from a blood test; for example, as a result of routine blood samples taken to investigate infertility. If excessive amounts of hormones are detected in the blood then a CT scan or a MRI scan will be arranged. The scan will show the exact position of the tumour.

CT Brain scan (Computed Tomography) is a specialised x-ray. It will take 20-30 minutes and an injection, into the back of your hand, of a contrast agent (dye) may be necessary to give the clearest picture of the tumour.

MRI Brain scan (Magnetic Resonance Imaging) is a specialised imaging technique that gives very clear pictures of the brain and will show the site and extent of the tumour. It usually takes 30-40 minutes and uses magnetism instead of x-rays. People with pacemakers cannot have this test and those with any other metallic implant should inform the doctor well before the test.

The treatment of Pituitary tumours

Your doctor will plan your treatment taking into consideration your general health. In other words the treatment is planned for each individual.

Drugs: Some drugs to shrink the tumour can be given, depending on the hormones that are being secreted. (For example a prolactin secreting tumour can be treated with a drug called Bromocriptine.)

Surgery: Is a common treatment for pituitary tumours. The operation is technically easier than for other brain tumours. Generally the surgeon aims to remove most but not all of the pituitary gland. If the pituitary gland does not recover then medication will need to be given to replace the missing hormones. This is not a major problem and is usually managed by a doctor called an endocrinologist.

Radiotherapy: This is the use of high energy x-rays to destroy tumour cells. It is often given following the surgery.

Radiotherapy is usually given as a course of treatments called 'fractions'. This usually means 20-30 treatments, once daily, 5 days a week for further information see the Radiotherapy for Brain Tumours page.